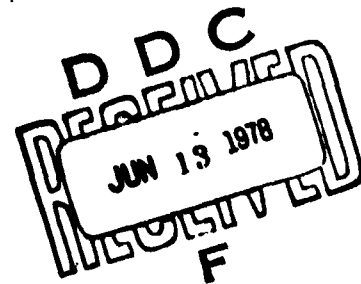


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## MILITARY SELF-DISCIPLINE: A MOTIVATIONAL ANALYSIS

Final Report

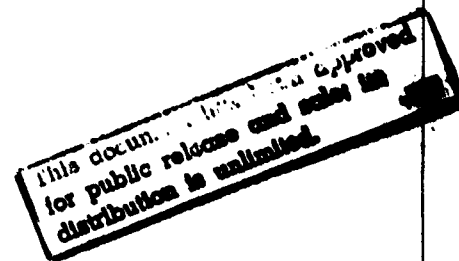
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The objective of this report is to understand some of the salient determinants and consequences of military self-discipline. Literature on the motivation to obey is reviewed and a motivational measure of obedience is developed and validated. The results of a survey instrument relating this measure to antecedent and performance factors are discussed and conclusions drawn.		

## PREFACE

This report documents research undertaken by CACI, Inc.-Federal to analyze the determinants and consequences of military self-discipline. Dr. Bertram I. Spector was the principal investigator. He received assistance from Dr. Richard E. Hayes and Mr. Eric D. Shaw of CACI. We would like to acknowledge the help and guidance received from Dr. Robert Hayles of the Office of Naval Research. Our thanks go to Ms. Nancy Streeter for editing the report and Karen Wolfe for typing it. Finally, we extend our gratitude to the fire chiefs and firefighters who assisted us in data collection.

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## I. INTRODUCTION

Some organizations -- namely, military and civilian paramilitary agencies such as police and fire departments -- require high degrees of obedience and discipline among their rank and file workers to accomplish their missions successfully. These activities routinely place the lives of their personnel as well as civilians in constant jeopardy. Obedience to orders, regulations, and authority, and maintenance of strong self-discipline along agency goals are justified by the need to maximize performance effectiveness, and thereby minimize danger and improve the chances for physical survival.

Despite unambiguous cues to new recruits that these occupations have always required high degrees of obedience, increasing problems have recently occurred involving a new generation of enlistees who are unwilling to accept unquestioning discipline and authority as absolutes (Evans, 1978). In a survey of enlisted Navy men, Bachman, et al. (1977) found that the attitudes of the younger, noncareer enlisted men were more hostile to unquestioning military obedience than the senior career-oriented NCO's. Other studies of Army units during World War II (Stouffer, et al., 1949), Korea (Little, 1964), and Vietnam (Moskos, 1969) bring into focus a gradually developing trend indicating the diminished impact of strict military discipline on motivation in combat.

It is becoming obvious that basic training no longer instills the traditional motivation in enlistees that has been adequate in the past (Bauer, et al., 1976). Once enlistees are removed from the close supervision and external control that they received during basic training, motivation quickly declines. The structure and control imposed on enlistees during training apparently do not become integral elements of enlistees' motivation once they are actually on the job.

This crisis in obedience has given both military and paramilitary officers cause to worry. Disobedience can spread rapidly through the ranks,

degrading performance of "old timers" as well as new recruits, creating disciplinary problems, and decreasing job satisfaction. One manifest symptom of the crisis in obedience is the steadily increasing attrition rate among first-term enlisted males, which has reached 29.1 percent service-wide and 29.8 percent for the Navy, based on accession and attrition figures for fiscal year 1974 (Martin, 1977). This means additional recruitment needs, increased training costs, and short-term performance degradation for the military and paramilitary services.

The objective of this report is to understand some of the salient determinants and consequences of military self-discipline. Attempts are made to develop a valid and reliable motivational measure of obedience and self-discipline, and to identify some of its major antecedents and performance consequences. To place the research problem in proper perspective, a literature review is provided. The research is based on survey data from a firefighter sample that link the internalization of obedience to personality and educational factors and trace the impact of obedience on performance under stressful operating conditions.

## II. BACKGROUND

### Military Discipline

The traditional concept of military-style discipline involves a rigid and unquestioning adherence to rules, commands, authority, and subordination. A well-disciplined team will obey its orders no matter how dangerous or unpleasant the task. This type of discipline embodies total compliance to command decisions and is traditionally justified by the requirements for organizational efficiency in dangerous performance conditions (Janowitz, 1960, Janowitz and Little, 1974; Cortwright, 1975). Since any disorganization in the ranks might constitute a personal danger to group members, obedience to a centralized command offers one of the few vehicles for physical survival.

It is the purpose of such strict military discipline to submerge any trace of ego to organizational needs (Milgram, 1974). The individual responds in a nonthinking, reflex mode to commands from superiors. This type of domination of the individual is based on traditional authority patterns of threats and predicted negative sanctions in the event that mechanical compliance with orders is not forthcoming (Janowitz and Little, 1974).

However, some researchers have observed that military authority is gradually shifting from this traditional concept of absolute discipline to a more flexible and "positive" form of discipline (Janowitz and Little, 1974; Janowitz, 1960; Cortwright, 1975). The ultimate purpose of military discipline, after all, is to facilitate mission accomplishment. As new technology and increasingly sophisticated techniques are introduced into the service, highly specialized personnel are required who must take more initiative into their own hands. Thus, judgment and improvisation are becoming more critical to successful performance than strict adherence to rigid rules. However, to keep individual initiative in line with the doctrine, values, and objectives of the larger organization, intermittent reindoctrination is required to maintain positive discipline. This shift in the reality of military discipline relies on persuasion and positive incentives to influence the rank and file in achieving group goals. Manipulative and relations-oriented authority patterns are assumed to be better suited to organizations with high technology development, high interdependence among functions, and dispersion of forces than traditional domination (Janowitz and Little, 1974).

#### Military Self-Discipline

Either form of military discipline achieves its objectives when the individual internalizes its precepts and begins to view himself/herself as the instrument of the larger organization's wishes. This internalization is the source of "self-discipline." Defining the Marine Corps concept of self-discipline, Pendergast (1977) focuses on this willing internal

acceptance of regulation and obedience. Self-disciplined persons have control over themselves and do what is right for the organization of their own volition. They do not require a constant external force to keep them in line or to threaten and coerce them to achieve compliance. Self-disciplined persons can be relied upon to do their duty correctly and voluntarily, whether or not anyone checks on them. Thus, in military and paramilitary contexts, self-discipline can be defined in terms of an absolute motivation to obey to an internalized set of organizational rules and authority.

#### The Motivation to Obey (MO)

Obedience to authority and regulation is determined by a person's motivation to comply. For some, obedience is compelled by fear, threat, force, or punishment. Obedience may also be forthcoming in response to hedonistic need satisfaction or the desire to meet with social approval (Kohlberg, 1964). The common thread basic to each of these motives is the extrinsic source of control: Obedience is the response to perceived external pressures urging compliance. Extrinsically motivated persons lack a sense of freedom and self-determination and place themselves in subjection to external control.

However, obedience is the behavioral outcome only so long as the external motive remains present and credible. Milgram (1974) found that obedience among subjects dropped sharply when the experimenter, posing as an authority figure, left the subjects alone to proceed with the experiment as ordered. Obviously, a sense of obedience had not been internalized by these subjects; the motive for obedience remained entrenched in the external authority figure. While this external source is present, obedience is probable, but when the source is absent, disobedience is more likely. This motivational type can be labeled as an extrinsic (E) pattern.

Obedience can also be elicited in the absence of external compulsion. In this sense, a motive to comply with authority and regulation can be found in an internalized set of values that legitimizes the absolute right of the authority to request compliance (Kohlberg, 1964). Individuals motivated by this intrinsic source of control identify with the values of the authority not out of fear, but because their shared goals are accepted on faith or they are personally satisfying and rewarding in themselves (Katz, 1964). This type of obedience is more stable and lasting than the extrinsic type since the motive for obedience is internalized and unquestioned. Moreover, because authority is perceived as a legitimate and unquestioned power, there are no circumstances under which disobedience is likely to be elicited. This pattern of obedience is similar to the earlier description of self-discipline itself and can be labeled as an intrinsic: unquestioning (IU) type.

A third motive for obedient behavior lies in a principled respect for the rights and will of other human beings, one's duty toward others in society, and a sense of justice and conscience to do what is right (Kohlberg, 1964). Persons at this stage of conscience are likely to obey benevolent commands and authority that will maximize these principled motives. However, they are likely to be disobedient and revolt in the face of malevolent authority that requests acquiescence to behaviors that attack these principles (Kohlberg and Scharf, 1972; Milgram, 1974). While this type of obedience is also motivated by an internalized set of values, it differs from the preceding type in that it transcends the values of authority and regulation, although they may coincide in some cases. External commands are evaluated against internal principles. If they are acceptable to the individual, obedient compliance occurs, but if they are unacceptable, disobedience or defiance is the result. Thus, this type of obedience can be labeled as an intrinsic: transcendent (IT) pattern.

Table 1 summarizes this typology of obedience motivation. Types E and IT possess the potential for disobedient behavior, but Type IU is likely

TABLE 1  
Typology of Obedience Motivation

<u>Motive Type</u>	<u>Motivational Description for Obedience</u>	<u>Motivational Description for Disobedience</u>	<u>Corresponding Kohlberg (1964) Stages</u>
Extrinsic (E)	Obedience due to fear of punishment; sense of deference and submissiveness; hedonistic need for satisfaction; opportunism; need for gaining social approval and meeting social expectations.	Disobedience due to perceived lack of credible force; absence of authoritative rules or command figures; absence of opportunity to satisfy needs, gain social approval, or meet others' expectations.	1, 2, 3
Intrinsic: Unquestioning (IU) - Self-Disciplined Type	Obedience due to respect for law, order, and authority; unquestioning self-discipline.	Disobedience not likely to occur due to internalization of law and authority as legitimate and absolute.	4
Intrinsic: Transcendent (IT)	Obedience due to respect for others; duty toward others; conscience; principle.	Disobedience if law and authority are perceived to be malevolent and act against personal values of right and wrong, justice, and free will.	5, 6

to be self-disciplined under a wide variety of conditions and will continue to obey. A mechanical, and somewhat unthinking, compliance to authority's will is reliably elicited from IU types because of their internalization of the authority's legitimacy. These types are likely to be highly obedient workers in a traditional military discipline environment. A similar manifestation of automatic compliance can also be expected of E types because of their external fear or expediency motives. However, obedience can be predicted reliably only when external control sources are present and credible.

Behavior for the IT types is never mechanical. These types must process commands and regulations internally first, to judge their impact on personal values and principles. IT types practice a "judgmental obedience" rather than an unquestioning kind. They fall well within Janowitz and Little's (1974) category of an evolving "positive" military discipline based on individual initiative and self-reliance. The kind of obedience obtained from an IT type ultimately may be more effective than rote obedience to regulation if the situation demands unique, technology-based, and improvised solutions that could not have been anticipated in advance.

#### Some Antecedents of Obedience and Disobedience

Researchers have studied obedience and disobedience from many perspectives. A representative sample of their work is summarized below into the following categories: punishment, early socialization and personality development, occupational socialization, societal factors, and immediate situational factors.

a. The Impact of Punishment. Punishment has been found to be an effective method of achieving compliance to authority under certain conditions. It is useful if the punishment stimulus is of high intensity, if warm and personalized prior relationships have been formed between the punishment agent and the recipient, if verbal reasoning is used in

conjunction with physical punishment, and if the stimulus occurs quickly upon the occurrence of deviant behavior (Walters and Cheyne, 1969). In addition, Solomon's review of the punishment literature (1964) identified several parameters that are critical in determining the effectiveness of external punishment, including the nature of the initiating deviant behavior and aspects of the recipient's background and experience.

Due to these modifying factors, punishment cannot be relied on to ensure absolute obedient behavior all of the time. In a case study of a large plywood mill, Huberman (1964) found that fear-controlled behavior tended to aggravate the occurrence of desirable and effective results in dealing with lapses in discipline. Introduction of a relations-oriented approach to discipline in the mill yielded more favorable performance results. Crawford and Thomas (1975) found similar results aboard Navy ships, where nonjudicial punishment rates declined as the management style and organizational climate aboard the ships improved. Similarly, surveys of the legal profession (Carlin, 1966; Abel, 1977) conclude that fear of formal disciplinary proceedings has only moderate impacts on inhibiting unethical values and conduct.

**b. The Impact of Early Socialization and Personality Development.**

Socio-economic status, sex roles, family, and education have been hypothesized as likely socializing factors that affect the development of obedience. Middle class parents tend to induce an internal governor of conduct into their children, while working class parents socialize the external, punitive consequences of behavior (Aronfreed, 1968). Thus, high SES children internalize a sense of power to determine their own actions, while lower SES children are socialized into a subordinate and inhibited role. Similarly, girls in our society traditionally have been socialized to obey external authority and conform to parental rules, while boys generally have been encouraged to be more independent. Thus, different styles of obedience, ranging from the intrinsic to the extrinsic types, may be socialized early in life.

Internalization of obedience to authority structures is also fostered by the family unit, in which adults dominate and children may be punished for disobedient behavior. The school is another institutional setting in which children are placed in subordinate roles for the first 20 years of life and taught the meaning of obedient behavior (Milgram, 1974). The level of education attained has been identified as an important indicator of obedience (Association of the United States Army, 1977). Persons with a high school diploma have been found to be more trainable, reliable, motivated, and obedient than those without a diploma.

Some cognitive-developmental theorists (Vohlberg, 1969, 1958) have postulated a growth pattern in values and judgment from extrinsically motivated thought at early ages to intrinsically motivated thought in early adulthood. At the early end of the developmental continuum, judgments are based on strict obedience to rules and authority figures. At the late end, judgments are based on internalized principles and conscience that may or may not adhere to authority's desires. Cognitive restructuring and perceptual differentiation that evolve from greater social experience, participation, and role-taking activate internalization of system values and goals, and replace the need for external sanctions to ensure acceptable, disciplined behavior.

Ego development theorists (Moriarty and Toussieng, 1976) address the impact of identity development on obedience. Two ego developmental patterns have been specified that relate to two different styles of adolescent coping and obedience. The first type is called "censors." Their awareness is dependent on a strong reliance on parents and other nurturant authority figures. They are highly obedient and concerned with maintaining the traditional "rules of the game." The second type is called "sensors." These persons are more reliant on their own perceptions, their internal values, and the opinions of peers, rather than an authority. Obedience among this latter group would probably fall within the IT type.

In terms of the impact of personality, Milgram (1974) postulates the profile of an obedient person. Such an individual would have high needs for submissiveness, deference, social approval, blameavoidance, and survival. However, obedience is not a trait of highly aggressive or autonomous persons.

c. The Impact of Occupational Socialization. An adult's socialization into an occupation is often an experience of being put into a submissive role (Janowitz and Little, 1974). Traditional authority patterns maintain these values and create a context of domination in which the individual can divest himself/herself of responsibility to a superior (Milgram, 1974). Once this divestiture occurs, the individual is reduced to an obedient agent of the authority. One's actions can be entirely obedient and free of the inhibitions of self-image and moral values since responsibility has been relegated to the authority figure. In this agentic state, a person is only concerned with doing the job properly, following instructions, pleasing the authority, and fulfilling one's obligations to him/her.

Janowitz and Little (1974) describe an alternative pattern of authority in which strict domination defers to a more participant- and relations-oriented managerial style. The rationale for this authority style was discussed earlier in this report. These authors hypothesize that this "positive" authority style is likely to facilitate improved military discipline, albeit a different form of discipline, more in tune with a highly technologized and specialized organization. Cortwright (1975) suggests that there is little undisputed evidence that the traditional unquestioning type of military discipline contributes to combat effectiveness, and that, in fact, it hinders morale, detracts from organizational efficiency, exacerbates internal unrest among the rank and file, and reduces individual initiative which is required by a technologically changing military. The positive authority style might be a more appropriate command tool in today's military, according to Cortwright.

d. The Impact of Societal Factors. The current problem of disobedience in the military and paramilitary services is largely due to societal changes that are somewhat unrelated to the activities of these organizations. Society on the whole is increasingly skeptical of authority and established institutions that often appear arbitrary and unfeeling. The societal trend toward "doing your own thing" also encroaches on the concept of compliance with authority. Attitude measurement among the civilian population over time confirms this societal shift away from unquestioning adherence to authority's commands. The 1971 civilian sample surveyed by Kelman and Lawrence (1972) exhibited a much higher propensity to follow orders in a My Lai-type scenario than the 1973 civilian sample of Bachman, et al. (1977). In addition, when the 1973 sample was scrutinized further, it was found that younger sample members (age 19-24) were less inclined than older members of the sample to believe that servicemen should obey orders without question. This younger subgroup indicated approximately the same antimilitary inclination toward strict military obedience as a comparison group of noncareer enlisted Navy men.

e. The Impact of Immediate Situational Factors. Several studies (Stouffer, et al., 1949; Little, 1964; Moskos, 1969) indicate that, under the danger and immediacy of combat conditions, military discipline is not a critical motive for fighting men. Rather, combat troops are motivated by personal survival, team solidarity, protecting buddies, and returning home safely. Ideally, military discipline is aimed at accomplishing these very outcomes. Obviously, given these attitudinal findings, military discipline is being misperceived or its vehicle for accomplishment should be altered.

On the other hand, in the immediacy of the combat situation, where one's own life may be in jeopardy, the mission's objectives tend to become depersonalized (Milgram, 1974). Under such conditions, individual actions that may never have been considered valid from a personal moral perspective become acceptable. The greater the stress and danger in this type of

situation, the greater the probability of strict adherence to authority in the hope of maximizing team effectiveness and minimizing danger.

#### Some Consequences of Obedience and Disobedience

An immediate consequence for the military and paramilitary services of this obedience crisis is an increasing early attrition rate before basic training is completed or before the first enlistment expires. Personnel losses among non-high school graduates are about twice those of enlistees with diplomas (Martin, 1977). Other than this observable impact, few researchers have considered the likely behavioral performance of the different obedience motives.

While reliable role performance may be obtained from persons motivated by extrinsic control, Katz (1964) states that such performance will be of the lowest acceptable quality and will lack the innovation, spontaneity, and flexibility that lead to creative solutions, greater productivity, and critical corrective contingency planning in the event that things go wrong. In essence, under extrinsic controls, individuals have little motivation to do more than the rules prescribe, and the effort and costs expended to make external sanctions credible may produce suboptimal performance.

The consequences of intrinsic control include the likelihood of high-quality performance and the facility to deal with organizational rules in an innovative manner to achieve system goals effectively (Katz, 1964). Spector (1977) found that intrinsically motivated law students attached a high value to legal ethical standards. They were not compelled to abide by these norms by external sources, but their internalization of system goals led them to disciplined values in any case. Elsewhere, Spector (1973) and Weisband and Franck (1975) hypothesize that intrinsically controlled government officials would be more likely than extrinsically controlled types to stand up for their convictions, voice

their criticisms publicly, and resign in protest if the government of which they are a part diverges from what they consider to be proper action. Intrinsic (transcendent) control, in this case, would lead individuals to assess the situation, reevaluate their actions in terms of system goals, and act to preserve and achieve these goals.

### III. HYPOTHESES

Since the objectives of this study are to provide some exploratory and preliminary empirical results concerning the antecedents and consequences of self-discipline, two broad hypotheses were developed for testing.

Hypothesis 1. Intrinsic motives to obey are more likely than extrinsic motives to result from early socialization of love and discipline, high levels of education attainment, high levels of participation in occupational activities, and internally oriented personality structure.

Hypothesis 2. Intrinsic motives to obey are likely to yield more reliable and lasting obedience to authority than extrinsic motives.

### IV. PROCEDURE

#### Sample

The sample used in this study comprised 79 firefighters from five urban and suburban fire departments in Michigan. Why firefighters? First, several discussions with fire chiefs in both large and small communities confirmed a growing recognition and concern at the supervisory level of maintaining military-style obedience among the rank and file. Differing values between the younger and older firefighters, the growing militancy of unions, and the recent influx of new enlistees have exacerbated command problems of maintaining discipline. Obedience problems have even spread to long-tenured firefighters who have been influenced by the motivational decline among the new recruits.

Second, as a civilian paramilitary occupation, firefighting involves highly stressful and dangerous tasks that resemble combat, in which values of life and death are paramount. Moreover, firefighting requires intense teamwork and high degrees of obedience to authority and regulation to achieve mission goals. Thus, empirical findings among a sample of firefighters might serve as a good indication of motivation among new military enlistees and what might be done to improve it. A firefighter sample is also somewhat more accessible for purposes of administering a questionnaire than a military subject pool. In all, firefighters are a suitable proxy group for comparison to a military population as well as an interesting sample group in itself.

Of 290 questionnaires distributed to members of the five departments, 90 (31.0 percent) were returned and 79 (27.2 percent) of these were usable. Because of this voluntary, self-selection procedure, it is conceivable that only a certain type of firefighter -- namely, the more obedient types -- would agree to participate in the sample by completing and returning a questionnaire. To test for this potential sampling bias, the average age and length of tenure of respondents in each department were compared to estimates of these factors made by each fire chief. As the figures in Table 2 indicate, there are few discrepancies between the respondent averages and the departmental estimations. Respondents chose to participate in the sample in approximately the same proportions that they exist in their departments. Thus, it may be inferred that a representative sample was obtained despite self-selection.

But do we know any further information about the individuals who chose not to respond? To a degree, analysis of those firefighters who did respond but did not complete the entire questionnaire may shed light on those who did not respond at all. The aggregate measure of firefighter motivation is significantly related to whether or not a respondent completed his/her questionnaire completely (chi square = 17.293,  $p < .0006$ ,  $N = 77$ ). Table 3 presents the bivariate frequencies and percentages.

**TABLE 2**  
**Is There Self-Selection Bias in the Sample?<sup>a</sup>**

		<u>Age</u>	<u>Years of Service as Firefighter</u>
Department 1 <sup>b</sup> : (N=13)	Respondent Average	37.1	14.7
	Department Estimate	30.0	7.0
Department 2: (N=3)	Respondent Average	36.3	9.5
	Department Estimate	31.0	10.0
Department 3: (N=22)	Respondent Average	38.9	12.7
	Department Estimate	40.0	10.0
Department 4: (N=15)	Respondent Average	39.2	13.5
	Department Estimate	39.0	15.0
Department 5: (N=26)	Respondent Average	42.6	16.0
	Department Estimate	42.0	15.0

<sup>a</sup> Department locations are not used to preserve anonymity of responses.

<sup>b</sup> Discrepancies between the respondent averages and departmental estimations for Department 1 may have resulted from faulty estimation or a volunteer bias toward older, longer-tenured, and perhaps more obedient firefighters.

**TABLE 3**  
**The Internal/External Motivation  
of Completers and Noncompleters (N=77)**

<u>Degree of Firefighter Motivation</u>	<u>Completers</u>	<u>Noncompleters</u>
High External Motive	2 3.8%	0 0%
Moderate External Motive	12 22.6%	17 70.8%
Moderate Internal Motive	33 62.3%	7 29.2%
High Internal Motive	6 11.3%	0 0%
	53 100.0%	24 100.0%

Chi Square = 17.293  
 $p < .0006$

Twenty-four respondents (30.3 percent of the entire sample) did not complete the entire questionnaire; that is, they omitted answers to the entire personality section and/or the entire personal background section, both of which appear toward the end of the survey booklet. Since attention was paid to ensure that the questionnaires would be completely anonymous and not seen by peers or supervisors, personal privacy motives in noncompletion can be ruled out. While there may be several alternate reasons for noncompletion, one possible explanation points to an absence of internalized self-discipline to complete the questionnaire when there is no external enforcement or compulsion to do so. This hypothesis is borne out by the data: 70.8 percent of the noncompleters were externally motivated as firefighters, while 73.6 percent of the completers were internally motivated.

These results suggest that noncompleters behaved as they did because they were not compelled to do so by the experimenter or their supervisors. On the other hand, completers finished the questionnaire due to an internalized and self-disciplined motivation to obey the requests of authority figures. By inference, individuals who chose not to respond at all appear to be more similar to the noncompleters in their motivation and their manifest behavior than to the completers. If this is so, the current self-selected sample may be somewhat biased in favor of obedient types; the potentially disobedient types never bothered to complete the questionnaire.

Factors such as age, length of tenured service, rank, and educational level attained are critical socio-economic and background modifiers that might influence the motivation to obey. The sample profile on these factors is presented in Table 4. Columns A and B compare the entire sample with a subsample of short-tenured firefighters (from 1 to 10 years of service).

The average age of a respondent is 40 years, but within the subsample the average age drops, understandably, to 29-1/2 years. Similarly, the

TABLE 4

Comparison of the Firefighter Sample With a Navy Sample

	<u>A</u>	<u>B</u>	<u>C</u>
	Firefighter Sample (N=79)	Short-Tenured Firefighter Sub- Sample (N=28) <sup>a</sup>	1974-75 Navy Enlisted Male Sample (N=22,073) <sup>b</sup>
Average Age	40 years	29.5 years	25.3 years
Average Years Service	14.2 years	5.8 years	1-6 years
Percent Non-Officer	74.7	100.0	77.2
Percent High School Graduate and Beyond	96.9	95.4	91.3
• Percent Beyond H.S.	56.3	72.7	32.6
• Percent H.S. Graduate	40.6	22.7	58.7
Percent Non-High School Graduate	3.1	4.5	8.7

<sup>a</sup> Short-Tenure = 1 to 10 years of service.<sup>b</sup> Source: Durning and Mumford (1976) - HRM Survey sample.

average length of service is considerably lower and there are no officers present in the short-tenured subsample. As for educational achievement, the younger subsample contains a significantly higher percentage of respondents that have some college experience or college degrees. This can be understood as an indication of higher recruitment standards in recent years, the increased accessibility of higher education, or a greater motive for achievement among the younger firefighters.

Column C presents data on these same factors for a large 1974-75 sample of Navy enlisted men (see Durning and Mumford, 1976). Except for larger percentages of beyond-high school firefighters, the short-tenured profile is fairly comparable to the Navy sample. It appears that the younger firefighter subsample taps a similar type of person as is recruited into the Navy. This comparison reinforces the contention that the analytical conclusions of the firefighters survey may be strongly analogous to motivational phenomena among the new military enlistees.

### Measures

The questionnaire administered to the firefighters consists of four sections: Kohlberg's (1964) Moral Judgment Interview, firefighter experience items, Stein's (1963) Self-Description Questionnaire (SDQ), and early socialization and background items.

a. Motivation to Obey (MO) Measure. The Kohlberg section is the cornerstone of the questionnaire since it is employed to measure the "motivation to obey" concept. Kohlberg's interview confronts respondents with social dilemmas concerning justice and right and wrong, in which they must choose what they consider to be the best solution. See Table 5 for the two scenarios included in the questionnaire.

The content analytic system (Kohlberg, et al., 1977) to score the open-ended answers helps to place each respondent along Kohlberg's developmental continuum of six sequential stages ranging from extrinsic to

TABLE 5

Kohlberg Moral Judgment Scenarios Used in the Questionnaire

1. In Europe, a woman was near death from a special kind of cancer. There was one drug doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the drug cost him to make. He paid \$200 for the radium and charged \$2,000 for a small dose of the drug. The sick woman's husband, Heinz, went to everyone he knew to borrow the money, but he could only get together about \$1,000 which is half of what it cost. He told the druggist that his wife was dying, and asked him to sell it cheaper or let him pay later. But the druggist said, "No, I discovered the drug and I'm going to make money from it." So Heinz got desperate and broke into the man's store to steal the drug for his wife.

2. In a country in Europe, a poor man named Valjean could find no work, nor could his sister and brother. Without money, he stole food and medicine they needed. He was captured and sentenced to prison for six years. After a couple of years, he escaped from the prison and went to live in another part of the country under a new name. He saved money and slowly built up a big factory. He gave his workers the highest wages and used most of his profits to build a hospital for the people who couldn't afford good medical care. Twenty years had passed when a tailor recognized the factory owner as being Valjean, the escaped convict whom the police had been looking for back in his home town.

intrinsic motivation (see Table 6). While Kohlberg's purpose in constructing this developmental sequence was to identify levels and growth in moral judgment, these stages also document a progression from extrinsic to intrinsic motivations to obey. Table 1, presented earlier, indicated the correspondence between Kohlberg's stages and the extrinsic (Stages 1, 2, and 3), intrinsic: unquestioning (Stage 4), and intrinsic: transcendent (Stages 5 and 6) motivation types. While internal-external locus of control measures (Lefcourt, 1976) are concerned with perceptions of personal efficacy, the Kohlberg scale measures the motivation to comply with authority and regulation, and therefore is more appropriate to this study's objectives.

Respondents were coded into Kohlberg's continuum in line with the "motivation to obey" dimension. A 21-point scale was established to code respondents as ideal types (that is, a pure stage 1, 2, 3, 4, 5, or 6) or if they scored between these types (there are three increments between each stage). There was sufficient variation in the resulting MO scores to treat the index as an interval variable. Given this coding method, the intercoder reliability coefficient on an 18 percent random sample of questionnaires was 0.931. This is a very high reliability score considering the open-ended nature of the responses to be coded.

Table 7 compares the resulting Kohlberg scores from the firefighter sample and short-tenured subsample with other samples. For the sake of comparison, firefighters' scores on the MO index were collapsed into the six ordinal stages. The largest percentage of firefighters fall into the IU type (Stage 4) or the IT type (Stage 5). The mean value for the entire sample and the short-tenured subsample is 4.3, just within the IU type.

As expected, a large number of firefighters are highly self-disciplined (IU types). However, an even larger percentage transcends strict obedience to authority and regulation and is motivated to comply on the

TABLE 6  
Kohlberg's Stages

Stage 1. Obedience and Punishment Orientation: Act out of fear of punishment and threat, and out of deference to superior power or authority.

Stage 2. Egoistic Orientation: Act to satisfy one's own basic needs; hedonistic and opportunist motivation.

Stage 3. Good-Boy Orientation: Act to please others and get social approval; conformist motives; act along expected roles.

Stage 4. Authority Orientation: Act out of unquestioning respect for law and authority.

Stage 5. Social Contract Orientation: Act out of respect for the rights and will of others; recognize the arbitrariness in law and authority.

Stage 6. Conscience Orientation: Act based on one's own conscience and principles of justice, free will, and right and wrong.

TABLE 7  
Comparison of Firefighter Scores on the Motivation to Obey (MO) Index  
With Other Samples (in percentages)

MO Type	Kohlberg Stage	Firefighter Sample (Mean Age=40, N=79)	Short-Tenured Firefighter Sample (Mean Age=29-1/2, N=28)	Law Student Sample (N=92) <sup>a</sup>	Middle Class Sample (Age=20, N=16)	Lower Class Sample (Age=20, N=18)
Extrinsic	1	0	0	0	5	7
	2	1.2	0	1.1	15	24
	3	5.1	7.1	23.9	20	29
Intrinsic: Unquestioning	4	43.0	46.4	65.2	33	30
	5	45.6	35.7	9.8	23	9
Transcendent	6	5.1	10.7	0	5	1

<sup>a</sup> Spector, 1977.

<sup>b</sup> Kohlberg and Kramer, 1969.

basis of personal evaluation of commands (IT types). At times, these types may be disobedient to authority if they consider particular commands or regulations to be arbitrary or unproductive.

The firefighters possess a very different motivational profile in comparison to the other samples presented in Table 7. However, one commonality among all the samples is that the distribution mode usually falls at Stage 4, the self-disciplined type. This finding corresponds to Kohlberg's empirically based conclusions that most people in the United States are motivated by strict and unquestioning adherence to law and order (Kohlberg, 1969).

b. Firefighter Experience Measures. This section of the questionnaire was developed with reference to several firefighting training studies and manuals (Dallman and DeLeo, 1976, Hudiburg and Douglas, 1960; Coppock and Coppock, 1958). Table 8 lists the principal measures extracted from the questionnaire items. These variables tap aspects of occupational socialization, motivation, and participation, as well as attitudes concerning various aspects of performance under stressful conditions.

c. Personality Need Measures. The Stein SDQ was chosen to measure personality need structure. It explicitly measures respondents' manifest social and psychological needs on the basis of Murray's (1938) typology. Table 9 presents the 20 needs and their definitions. The instrument asks respondents to rank order the definitions of the needs in terms of how well each describes themselves. A hierarchical personality structure is constructed for each respondent if all of the ranks are treated in aggregate, and individual need measures are accessible from the SDQ to test particular hypotheses. The SDQ has undergone a great deal of reliability and validity testing, as reported in Stein (1971) and Stein and Neulinger (1968).

**TABLE 8**

**Firefighter Experience Measures**

**Years of service as a firefighter**

**Rank in department**

**Degree of attraction to firefighting based on remunerative motives**

**Degree of attraction to firefighting based on achievement motives**

**Degree of attraction to firefighting based on affiliative motives**

**Degree of participation in firefighting supervision**

**Degree of internal motivation to be a good firefighter**

(based on aggregate respondent ranks on the following motives:  
duty to community, loyalty to team, sense of pride in work,  
sense of duty to supervisor, personal acceptance of regulation,  
making money, knowledge of supervision, fear of demotion, desire  
for public recognition, and desire not to defy regulation)

**Firefighter performance: Teamwork**

**Firefighter performance: Obedience to supervisor**

**Firefighter performance: Risk-taking**

**Firefighter performance: Obedience to rules and procedures**

**Firefighter performance: Work challenge**

TABLE 9  
Definitions of Manifest Needs by Murray

<u>Need</u>	<u>Brief Definition</u>
n Abasement	To submit passively to external force. To accept injury, blame, criticism, punishment. To surrender. To become resigned to fate. To admit inferiority, error, wrongdoing, or defeat. To blame, belittle, or mutilate the self.
n Achievement	To accomplish something difficult. To master, manipulate, or organize physical objects, human beings, or ideas. To overcome obstacles and attain a high standard.
n Affiliation	To draw near and enjoyably co-operate or reciprocate with an allied other (an other who resembles the subject or who likes the subject). To please and win affection of a cathected object.
n Aggression	To overcome opposition forcefully. To fight. To revenge an injury. To attack, injure, or kill another. To oppose forcefully or punish another.
n Autonomy	To get free, shake off restraint, break out of confinement. To resist coercion and restriction. To avoid or quit activities prescribed by domineering authorities. To be independent and free to act according to impulse. To defy convention.
n Blameavoidance	To avoid situations where one might be blamed for one's actions.
n Counteraction	To master or make up for a failure by restraining. To overcome weaknesses, to repress fear. To efface a dishonor by action. To search for obstacles and difficulties to overcome. To maintain self-respect and pride on a high level.
n Defenceance	To defend the self against assault, criticism, and blame. To conceal or justify a misdeed, failure, or humiliation. To vindicate the ego.

Continued

**Table 9**  
**Definitions of Manifest Needs**  
**Continued**

<u>Need</u>	<u>Brief Definition</u>
n Deference	To admire and support a superior. To praise, honor, or eulogize. To yield eagerly to the influence of an allied other. To emulate an exemplar. To conform to custom.
n Dominance	To control one's human environment. To influence or direct the behavior of others by suggestion, seduction, persuasion, or command.
n Exhibition	To make an impression. To be seen and heard. To excite, amaze, fascinate, entertain, shock, intrigue, amuse, or entice others.
n Harmavoidance	To avoid pain, physical injury, illness, and death. To escape from a dangerous situation. To take precautionary measures.
n Infavoidance	To avoid humiliation. To quit embarrassing situations or to avoid conditions which may lead to belittlement. To refrain from action because of the fear of failure.
n Nurturance	To give sympathy and gratify the needs of a helpless object. To assist an object in danger. To feed, help, support, console, protect, comfort, nurse, heal.
n Order	To put things in order. To achieve cleanliness, arrangement, organization, balance, neatness, tidiness, and precision.
n Play	To act for "fun" without further purpose. To seek enjoyable relaxation of stress. To participate in games, sports, dancing, drinking parties, cards.
n Rejection	To separate oneself from a negatively cathexed object. To exclude, abandon, expel, or remain indifferent to an inferior object.
n Sentience	To seek and enjoy sensuous impressions.

Continued

**Table 9**  
**Definitions of Manifest Needs**  
**Continued**

<u>Need</u>	<u>Brief Definition</u>
n Sex	To form and further an erotic relationship. To have relationships with the opposite sex.
n Succorance	To have one's needs gratified by the sympathetic aid of an allied object. To be nursed, supported, sustained, surrounded, protected, loved, advised, guided, indulged, forgiven, consoled. To always have a supporter.
n Understanding	To ask or answer general questions. To be interested in theory. To speculate, formulate, analyze, and generalize.

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Sources: C. Hall and G. Lindzey, Theories of Personality, 2nd Edition (New York: John Wiley and Sons, 1970); M. Stein, Volunteers for Peace (New York: John Wiley and Sons, 1966).

d. Early Socialization and Background Measures. The measures included in this section are listed in Table 10. They include straightforward items concerning education and financial status, as well as paternal and maternal love and discipline received by the respondent as a child.

TABLE 10  
Early Socialization and  
Background Measures

Age  
Marital status  
Educational level attained  
Financial position now  
Financial position while growing up  
Paternal discipline received  
Maternal discipline received  
Paternal love received  
Maternal love received

#### Data Analysis

Analyses were performed on the "motivation to obey" index in relation to the firefighter experience, personality need, and early socialization and background measures. Pearson product moment correlations were computed between the MO index and its hypothesized antecedents if these latter variables were interval level measures. Otherwise, analyses of variance (ANOVA) were performed. ANOVA's were also performed between the MO index and the firefighting performance measure.

#### V. RESULTS

##### Validity of the MO Index

Prior to analyzing the antecedents and consequences of military obedience, a validation test of the MO index itself was performed. The

index has been shown to possess content validity in terms of its conceptual framework (Kohlberg, 1969) and its correspondence to the intrinsic and extrinsic motivations to obey. Its construct validity was tested by computing Pearson product moment correlations between the MO index and a set of independent questions in the survey that measure various aspects of a firefighter's intrinsic and extrinsic motivation to perform well on the job. If these survey items relate to the MO index in the expected direction, it can be assumed that the index, in fact, measures intrinsic and extrinsic motivations to comply and obey authority.

Two significant relationships were found that reinforce the construct validity of the MO index. As the MO index increases toward the Type IT end of the continuum, the importance of team loyalty motives among firefighters also increases ( $r = .3414$ ,  $p < .07$ ,  $N = 28$ ). On the other hand, as the MO index decreases toward the Type E end of the spectrum, the importance of duty toward one's supervisor increases ( $r = -.3426$ ,  $p < .08$ ,  $N = 26$ ). These relationships were found using the subsample consisting of firefighters with comparatively short tenure (from 1 to 10 years). The first relationship suggests that an intrinsic: transcendent motivation to obey implies an internal sense of commitment, colleagueship, and recognition of interdependence within firefighting teams. As one would expect, a sense of duty among peers motivates obedience for these IT types, rather than fear of external compulsion or belief in authority's legitimacy. Another anticipated finding is suggested by the latter relationship. Compliance is obtained among E types when there is a strong influence of perceived external enforcement associated with authority.

#### Antecedent Relationships

Few significant relationships were found in the initial analysis of the total sample. In aggregate, the total sample represents a large and

diverse group, ranging in age from 21 to 64 years, in departmental tenure from 1 to 34 years, in departmental rank from fire chief to firefighter, and in education from some high school training to bachelor degree recipients. It could be hypothesized that the varied interests of such a group were reflected in the data, cancelling each other out and resulting in the emergence of few significant trends.

However, the subsample of firefighters with comparatively short tenure in their departments (from 1 to 10 years,  $N = 28$ ) is likely to have more focused interests and attitudes, enabling significant trends to emerge in an analysis. Moreover, since recent motivational difficulties have arisen among new recruits in the military and paramilitary services, this younger subsample may be a more appropriate testbed for the study's hypotheses. The following analyses are based on this subsample.

Several personality needs --  $n$  Achievement and  $n$  Counteraction -- are strongly related to intrinsic motivation as measured by the MO index ( $r = .49$ ,  $p < .02$ ,  $N = 21$ , and  $r = .50$ ,  $p < .02$ ,  $N = 20$ , respectively), whereas  $n$  Deference, as expected, is strongly linked to extrinsic motivation ( $r = -.41$ ,  $p < .08$ ,  $N = 19$ ). Respondents' educational level is also related significantly to the MO index (ANOVA,  $p < .07$ , eta-squared = .24) as indicated in Table 11. The relationship between these two variables appears to be curvilinear -- high school graduates tend to be highly self-disciplined (IU types), but those who have gone beyond high school as well as those who never finished high school are intrinsic: transcendent types. However, the small number of cases in some of these educational levels may be distorting these results. None of the other background, early socialization, personality need, or firefighter experience measures relate significantly to the MO index.

#### Consequence Relationships

Again using the subsample of firefighters with short-tenure, the MO index was found to relate significantly to a firefighter performance measure: obedience to supervisory authority under stressful operating conditions

TABLE 11

Analysis of Variance of the MO Index by Respondents'  
Educational Level (Short-Tenured Firefighters Only)

<u>Source</u>	<u>Degrees of Freedom</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>F-Statistic</u>	<u>Significance</u>
Between Levels	2	2.117	1.058	2.984	.07
Within Levels	19	6.738	.355		
Total	21	8.855			

Eta = .489, Eta-Squared = .239

<u>Educational Level</u>	<u>N</u>	<u>Mean<sup>a</sup></u>	<u>Standard Deviation</u>
Beyond High School	16	4.525	.636
High School Graduate	5	4.020	.409
Non-High School Graduate	1	5.500	-
Total	22	4.455	.649

<sup>a</sup> The theoretical breakpoints between Types E, IU, and IT are:

Type E  $\leq$  3.5  
3.5 < Type IU  $\leq$  4.5  
Type IT > 4.5

(ANOVA,  $p < .05$ , eta-squared = .14). Table 12 presents the results. This relationship suggests that intrinsic: transcendent motivation yields better performance under duress than self-disciplined (IU) motives. None of the four other performance measures relate significantly to the MO index.

## VI. DISCUSSIONS AND CONCLUSIONS

The findings strongly confirm the feasibility of the motivational approach to the analysis of military obedience. The MO index was validated as a measure of intrinsic and extrinsic motivation to comply with authority. This result enabled us to proceed with analyzing some of the salient determinants and performance consequences of the motivation to obey.

The personality antecedents of the motivation to obey were anticipated in Hypothesis 1. Intrinsic types tend to be more self-oriented than extrinsic types. Achievement motives and counteractive needs to perform better, compensate and overcome obstacles, and prove capability to oneself drive intrinsically controlled persons. Motivation is derived entirely from internal sources. This finding is valid for the intrinsic: transcendent types primarily and, to a lesser degree, the self-disciplined, intrinsic: unquestioning types. Extrinsic types, on the other hand, are motivated by deferential needs to support superiors, and conform to custom, regulation, and the authority of others. Dependency on external authority and domination by that authority are the foremost characteristics of the extrinsically controlled person.

The educational determinants of the motivation to obey are somewhat more complex in their interpretation if the relationship remains stable with a larger N. The MO scores for the high school graduate level fall into the highly self-disciplined type, while the college and below-high school levels are intrinsic: transcendent. This curvilinear relationship suggests the possibility of a temporary retrogression phenomenon among the

TABLE 12

Analysis of Variance of the MO Index by Firefighter Performance:  
Obedience to Supervisory Authority (Short-Tenured Firefighters Only)

<u>Source</u>	<u>Degrees of Freedom</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>F-Statistic</u>	<u>Significance</u>
Between Levels	1	2.000	2.000	4.141	.05
Within Levels	26	12.557	.483		
Total	27	14.557			

Eta = .371; Eta-Squared = .137

<u>Firefighter Performance: Obedience to Authority</u>	<u>N</u>	<u>Mean<sup>a</sup></u>	<u>Standard Deviation</u>
Moderate Obedience	18	4.17	.708
Better Than Average Obedience	10	4.73	.670
Total	28	4.37	.734

<sup>a</sup> The theoretical breakpoints between Types E, IU, and IT are:  
Type E  $\leq$  3.5  
3.5 < Type IU  $\leq$  4.5  
Type IT > 4.5

high school graduate category. That is, the mean values on the MO index suggest a drop in intrinsic motivation among high school graduates that may return to higher index levels in later years. While the present data cannot test such a longitudinal assumption, a similar temporary retrogression phenomenon in moral judgment was uncovered by Kohlberg and Kramer (1969) at this same life juncture.

This temporary retrogression may be used to the advantage of the military and paramilitary services. Persons who possess a high school diploma, but do not have any college experience, are by far the most self-disciplined (IU) types found in the sample. Recruitment from among this group exclusively should improve traditional, strict military obedience, as has been suggested by AUSA (1977) and Martin (1977). As was documented by these same sources, disobedience and attrition rates among non-high school graduates is much higher than among graduates. This may be the case because the below-high school category scored as IT types, who are prone to judge authority and its orders and respond obediently or disobediently in terms of personal conscience. Similarly, the beyond-high school group, which placed just within the IT type, is not likely to accept authority unquestioningly and maintain the propensity to disobey.

The performance consequences of obedience motivation are the most interesting of all. Apparently, when faced with stressful performance conditions in which lives and property are at stake, IT type firefighters recognize the need for centralized and uniform command throughout the fighting force to reduce casualties. Their obedience to supervisory authority under such circumstances is superior to that of the self-disciplined (IU) types. While it should be noted that the likely performance of the self-disciplined types is ranked in the data as adequate, the IT types are likely to perform better than average due to their inner motivation of responsibility to their fellow man.

Especially in terms of performance, the social context of obedience is critical. Performance situations usually involve the joint influence

of peers and authority (Milgram, 1974). As demonstrated in the case of the IT types in the analysis, an inner sense of responsibility to team workers and to save lives in general motivates these types of firefighters to obey authority with greater intensity than even the traditionally self-disciplined types. While working in a group or organization may release the individual from the control of authority and enable behavior congruent with personal standards, it also demands centralized and coherent control to facilitate proper and efficient functioning and coordination of each of the organizational elements. The latter's pull on the individual is often greater than the drive to autonomy, and autonomous conscience usually subordinates itself to the external control of the hierarchical organization (Milgram, 1974).

Persons are often willing to obey and comply with authority under stressful performance conditions. They view themselves, under such circumstances, as "agents of authority," in which authority, from its central vantage, has greater perspective on the situation than the individual and understands the impact that each part of the organization can make in achieving critical mission goals. Future research on military discipline should further analyze these important relationships among performance-under-fire, the pull toward team peers, the strain toward authority's control, and the several types of motivation to obey authority.

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